

Note to reviewers: Application of the following draft short-listing criteria are intended to provide an assessment of the relative effectiveness of draft BDCP Conservation Strategy Alternatives (CSAs) and associated elements. The intended outcome of applying the criteria to each of the CSAs is to provide the Conservation Strategy Workgroup with the information necessary to identify a short-list of CSAs that will be further developed. It is intended that the short-listed CSAs will represent a clearly defined range of differing approaches to achieving the BDCP planning goals and objectives. The further-defined short-listed CSAs will then be evaluated using a different and more rigorous set of criteria to craft the proposed BDCP Conservation Strategy.

The draft short-listing criteria presented below were developed based on the BDCP Planning Agreement, draft BDCP conservation strategy elements developed to date (e.g., draft BDCP conservation objectives), previously developed criteria for evaluating approaches to conserving the Delta, and criteria suggested by BDCP participants (Mount et. al.2006)¹. Each of the criteria is followed by a rationale statement describing the purpose of and reason for recommending criteria. It is anticipated that each of the CSAs will be qualitatively assessed against the criteria in narrative form. The criteria will be applied using the professional judgment of experts based on the present understanding of how the Bay-Delta ecosystem operates. Some criteria will be applied at the species-specific level for each CSA (e.g., Criterion 8). The level of certainty regarding conclusions will be included in the qualitative narrative for each criterion. There is necessary redundancy among some criteria due to the breadth of some of the criteria (e.g., the Planning Agreement (PA) preliminary conservation objectives are broad and encompass the draft BDCP conservation objectives).

Draft Short-Listing Criteria:

1. Relative degree to which each CSA can meet each of the following PA Planning Goals (PA Section 3) within the constraints of the CSA elements for each of the covered fish species.
 - A. Provide for the conservation and management of Covered Species within the Planning Area
 - B. Preserve, restore and enhance aquatic, riparian and associated terrestrial natural communities and ecosystems that support Covered Species within the Planning Area through conservation partnerships
 - C. Allow for projects to proceed that restore and protect water supply, water quality, and ecosystem health within a stable regulatory framework;

¹ Mount, Jeffrey, Robert Twiss, and Richard M. Adams. 2006. *The Role of Science in the Delta Visioning Process: A report of the Delta Science Panel of the CALFED Science Program*. Available online at http://science.calwater.ca.gov/pdf/CSP_delta_vision_process_Twiss_062306.pdf

- D. Provide a means to implement Covered Activities in a manner that complies with applicable State and federal fish and wildlife protection laws, including CESA and FESA, and other environmental laws, including CEQA and NEPA;
- E. Provide a basis for permits necessary to lawfully take Covered Species;
- F. Provide a comprehensive means to coordinate and standardize mitigation and compensation requirements for Covered Activities within the planning Area;
- G. Provide a less costly, more efficient project review process which results in greater conservation values than project-by-project, species-by-species review
- H. Provide clear expectations and regulatory assurances regarding Covered Activities occurring with the Planning Area.

Rationale: *these criteria are recommended because they measure the relative ability of each CSA to achieve the PA Planning Goals.*

2. Relative degree to which each CSA can meet each of the following PA Preliminary Conservation Objectives (PA Section 6) within the constraints of the CSA elements for each of the covered fish species

- A. Provide for the protection of Covered Species and associated natural communities and ecosystems that occur within the Planning Area
- B. Preserve the diversity of fish, wildlife, plant and natural communities within the Planning Area
- C. Minimize and mitigate, as appropriate, the take of proposed covered Species
- D. Preserve and restore habitat and contribute to the recovery of Covered Species
- E. Reduce the need to list additional species
- F. Set forth species-specific goals and objectives
- G. Set forth specific habitat-based goals and objectives
- H. Implement an adaptive management and monitoring program to respond to changing ecological conditions
- I. Avoid Actions that are likely to jeopardize the continued existence of Covered Species or result in the destruction or adverse modification of critical habitat

Rationale: *these criteria are recommended because they measure the relative ability of each CSA to achieve the PA Preliminary Conservation Goals.*

3. Relative degree to which each CSA can achieve each of the following draft BDCP conservation objectives for each of the covered fish species.

- A. Reduce species mortality attributable to non-natural mortality sources.

- B. Provide water quality conditions necessary to enhance species production (reproduction, growth, and survival), abundance, and distribution.
- C. Increase habitat quality, quantity, accessibility, and diversity to enhance and sustain species production (reproduction, growth, and survival), abundance, and distribution, and to improve the resiliency of species populations to environmental change.
- D. Increase food quality, quantity, and accessibility (e.g., phytoplankton, zooplankton, macro-invertebrates, forage fish) to enhance species production (reproduction, growth, survival, abundance).
- E. Reduce the abundance of non-native competitors and predators to increase native species production, abundance, and distribution.

Rationale: *these criteria are recommended because they measure the relative ability of each CSA to achieve the draft BDCP conservation objectives.*

4. Relative degree to which each CSA is consistent with the following CALFED ERP Strategic Plan Goals:

[Note: *The following goals are unmodified from the CALFED Strategic Plan and reflect the broader CALFED ERP mandate (e.g., restoration throughout the Bay-Delta watershed, restoration of terrestrial species) relative to BDCP goals. The purpose of this criterion is to assess consistency of each CSA with the existing Strategic Plan goals and not the ability of the CSAs to achieve those goals.*]

- A. Achieve recovery of at-risk native species dependent on the Delta and Suisun Bay as the first step toward establishing large, self-sustaining populations of these species; support similar recovery of at-risk native species in the Bay-Delta estuary and the watershed above the estuary; and minimize the need for future endangered species listings by reversing downward population trends of native species that are not listed.
- B. Rehabilitate natural processes in the Bay-Delta estuary and its watershed to fully support, with minimal ongoing human intervention, natural aquatic and associated terrestrial biotic communities and habitats, in ways that favor native members of those communities.
- C. Maintain and/or enhance populations of selected species for sustainable commercial and recreational harvest, consistent with the other ERP strategic goals.
- D. Protect and/or restore functional habitat types in the Bay-Delta estuary and its watershed for ecological and public values such as supporting species and

biotic communities, ecological processes, recreation, scientific research, and aesthetics.

- E. Prevent the establishment of additional non-native invasive species and reduce the negative ecological and economic impacts of established non-native species in the Bay-Delta estuary and its watershed.
- F. Improve and/or maintain water and sediment quality conditions that fully support healthy and diverse aquatic ecosystems in the Bay-Delta estuary and watershed; and eliminate, to the extent possible, toxic impacts to aquatic organisms, wildlife, and people.

Rationale: *this criterion is recommended because the ERP is an ongoing restoration program that is being implemented within the BDCP planning area and in areas upstream and downstream of the planning area.*

- 5. Relative degree of the resistance and resilience of CSA infrastructure elements to withstand anticipated future effects of sea level rise and changes in runoff.

Rationale: *this criterion is recommended because it measures the relative long-term efficacy of each CSA to achieve water supply and species infrastructure-related objectives. This criterion was recommended by Mount et al. (2006).*

- 6. Relative degree to which each CSA can be implemented within a timeframe to meet the near-term needs of each covered fish species.

Rationale: *this criterion is recommended because it measures the relative ability of each CSA to be implemented within a time frame, including early elements of CSAs, that will address the immediate needs of covered fish species that are declining rapidly. This criterion (i.e., expediency) was recommended by Mount et al. (2006).*

- 7. Relative degree to which each CSA could substantially reduce the distribution and abundance of non-covered species.

Rationale: *this criterion is recommended because it measures the potential population-level effects on species not directly addressed by the BDCP (i.e., non-covered species). This criterion differs from the PA conservation objective to avoid future listing of species because it addresses species that are not covered under the BDCP but that could suffer substantial regional declines as a result of implementing a CSA (e.g., the Delta population of wintering waterfowl).*

- 8. Relative degree to which each CSA addresses the most important stressors affecting each of the covered fish species

Rationale: *this criterion is recommended because it measures the likely efficacy of each alternative for substantially improving the production, abundance, and distribution of each of the covered fish species.*

9. Relative degree of the adaptability of each CSA to address future changing needs of the covered fish species.

Rationale: *this criterion is recommended because it measures degree of management flexibility to address possible future changes in the Delta environment with minimal inputs of additional resources. This is similar to the “reversibility/adaptability” criteria recommended by Mount et al. (2006).*

10. Relative degree to which each CSA could improve the ecosystem processes that support each of the covered species and their habitats

Rationale: *this criterion is recommended because it measures the likely efficacy of each alternative to provide for the long-term needs of the covered species with minimal future inputs of resources to maintain the species.*

11. Relative degree to which the elements of each CSA will allow for the implementation of the covered activities such that the goals and purposes of the covered activities can be achieved.

Rationale: *this criterion is recommended because it measures the likely efficacy of each alternative to meet the purpose and need of the covered activities..*

12. Relative costs of implementing each of the CSA's.

Rationale: *this criterion recommended because it will provide for a relative comparison of costs and benefits as assessed under other criteria among the CSAs.*

13. Relative degree of risk for redirecting impacts to areas that are outside of the BDCP Planning Area.

Rationale: *this criterion is recommended because one or more of the CSAs could have adverse effects on environmental conditions for species and habitats downstream of the Delta.*